

ATTORNEY DOCKET NO.

11321-P068WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor application of: James M. Tour

Serial No.: 10/561,253

Filing Date: June 21, 2004

Art Unit: 1754

Examiner: Unknown

Title: *Polymerization Initiated at the Sidewalls of Carbon Nanotubes*

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Applicant hereby submits the following references in accordance with 37 C.F.R. §§ 1.56, 1.97 and 1.98. Copies of the references cited in the attached PTO/SB/08B are enclosed for the examiner's reference. Furthermore, pursuant to 37 C.F.R. § 1.97(g) and (h), no representation is made that this is material to patentability of the present application or that a search has been made.

Applicant hereby submits that claims of Applicant's referenced patent application are patentably distinguishable from these references.

Applicant does not believe that any fees are due at this time; however, the Director of Patents and Trademarks is hereby authorized to charge any fees relating to this Information Disclosure Statement under 37 CFR § 1.17 to Deposit Account No 23-2426 of WINSTEAD SECHREST & MINICK P.C. (referencing matter 11321-P068WOUS).

ATTORNEY DOCKET NO.
11321-P068WOUS



Respectfully submitted,

Date: March 19, 2007

Sarah S. Bittner
Sarah S. Bittner
Regis. No. 47,426
AGENT FOR APPLICANT

WINSTEAD SECHREST & MINICK P.C.
P.O. Box 50784
Dallas, Texas 75201
Phone: 713.650.2780
Fax: 214.745.5390

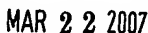
CERTIFICATE OF MAILING

I hereby certify that the attached *Information Disclosure Statement* and cited art are being deposited with the USPS, with sufficient postage as first class mail, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this the 19th day of March, 2007.

3/19/07
Date

J. E. Dunn
Signature

901998v.1 11321/P068WOUS



Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

(Use as many sheets as necessary)

Sheet	1	of	4
-------	---	----	---

Complete if Known

Application Number	10/561,253
Filing Date	June 21, 2004
First Named Inventor	James M. Tour
Art Unit	1754
Examiner Name	Unknown
Attorney Docket Number	11321-P068WOUS

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

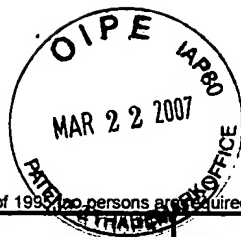
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY			
	2	WO 2002/60812	08/08/02	Tour et al.		
	3	WO 2004/046031	06/03/04	Rensselaer		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/561,253
Filing Date	June 21, 2004
First Named Inventor	James M. Tour
Art Unit	1754
Examiner Name	Unknown
Attorney Docket Number	11321-P068WOUS

Sheet 2 of 4

NON PATENT LITERATURE DOCUMENTS

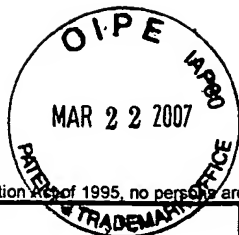
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	4	Ebbesen et al., "Large-scale Synthesis of carbon nanotubes", 358 Nature (1992), pgs. 220-222	
	5	Ebbesen et al., "Carbon Nanotubes", 24 Ann. Rev. of Mater. Sci. (1994), pgs. 235-264	
	6	Iijima et al., "Helical microtubules of graphitic carbon", 354 Nature (1991), pgs. 56-58	
	7	Saito et al., Physical Properties of Carbon Nanotubes, 1998, London: Imperial College Press; Sun et al., Nature, 2000, 403:384	
	8	Qin et al., "Electron microscopic imaging and contrast of smallest carbon nanotubes", 349 Chem. Phys. Lett. (2001), pgs. 389-393	
	9	Wang et al., "Single-walled 4 A carbon nanotube arrays", 408 Nature (2000), pgs. 50-51	
	10	Hafner et al., "Catalytic growth of single-wall carbon nanotubes from metal particles", 296 Chem. Phys. Lett. (1998), pgs. 195-202	
	11	Cheng et al., "Bulk morphology and diameter distribution of single-walled carbon nanotubes synthesized by catalytic ..", 289 Chem. Phys. Lett. (1998), pgs. 602-610	
	12	Nikolaev et al., "Gas-phase catalytic growth of single-walled carbon nanotubes from carbon monoxide", 313 Chem. Phys. Lett. (1999), pgs. 91-97	
	13	Thess et al., "Crystalline Ropes of Metallic Carbon Nanotubes", 273 Science (1996), pgs. 483-487	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/561,253
Filing Date	June 21, 2004
First Named Inventor	James M. Tour
Art Unit	1754
Examiner Name	Unknown
Attorney Docket Number	11321-P068WOUS

Sheet 3 of 4

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	14	Vander Wal et al., "Flame and Furnace Synthesis of Single-Walled and Multi-Walled..", 105(42) J. Phys. Chem. B. (2001), pgs. 10249-10256	
	15	Rao, et al., "Functionalised carbon nanotubes from solutions" Chem. Commun. (1996), pgs. 1525-1526	
	16	Wong, et al., "Covalently functionalized nanotubes as nanometre-sized probes in chemistry and biology", 394 Nature (1998), pgs. 52 55	
	17	Liu, et al., "Fullerene Pipes", 280 Science (1998), pgs. 1253-1256	
	18	Chen, et al., "Chemical attachment of organic functional groups to single-walled carbon nanotube material", 282 Science (1998), pgs. 95-98	
	19	Aihara, "Lack of superaromaticity in Carbon Nanotubes", 98 J. Phys. Chem. (1994), pgs. 9773-9776	
	20	Chen, Y. et al., "Chemical attachment or organic functional groups to single-walled carbon nanotube material", 13 J. Mater Res. (1998), pgs. 2423-2431	
	21	Bahr et al., "Covalent chemistry of single-wall carbon nanotubes" 12 J. Mater. Chem. (2002), pgs. 1952-1958	
	22	Banerjee et al., "Rational Chemical Strategies for Carbon Nanotube Functionalization" 9 Chem. Eur. J. (2003), pgs. 1898-1908	
	23	Holzinger et al., 'Sidewall Functionalization of Carbon Nanotubes", 40(21) Angew. Chem. Int. Ed. (2001), pgs. 4002-4005	

Examiner Signature	Date Considered
-----------------------	--------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/561,253
Filing Date	June 21, 2004
First Named Inventor	James M. Tour
Art Unit	1754
Examiner Name	Unknown
Attorney Docket Number	11321-P068WOUS

Sheet 4 of 4

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	24	Bahr et al., "Dissolution of small diameter single-wall carbon nanotubes in organic solvents", Chem. Commun. (2000), pgs. 193-194	
	25	Dyke, et al., "Solvent-Free Functionalization of Carbon Nanotubes," 125 J. Am. Chem. Soc. (2003), pgs. 1156 -1157	
	26	Bahr, et al., "Highly Functionalized Carbon Nanotubes Using in Situ Generated Diazonium Compounds," 13 Chem. Mater. (2001), pp. 3823-3824	
	27	Bahr et al. "Functionalization of Carbon Nanotubes by Electrochemical Reduction of Aryl Diazonium Salts:...", 123 J. Am. Chem. Soc. (2001), pgs. 6536-6542	
	28	Storey et al., "Kinetics and Mechanism of the Stannous Octoate-Catalyzed Bulk Polymerization of epsilon-caprolactone", 35 Macromolecules (2002), pgs. 1504-1512	
	29	Kowalski et al., "Kinetics and mechanism of cyclic esters polymerization initiated with tin(II) octoate, 1", 19 Macromol. Rapid Commun. (1998), pgs. 567-572	
	30	Messersmith et al., "Synthesis and Barrier Properties of Poly (epsilon-caprolactone)-Layered Silicate ...", J. of Polymer Sci.: Part A, 33 Polymer Chem. (1995), pgs. 1047-57	
	31	Bratcher, et al., "Study in the Dispersion of Carbon Nanotubes", 706 Mat. Res. Soc. Symp. Proc. (2002), pp. Z9.29.2 - Z9.29.6	
	32	Ederle, et al., "Carbanions on Grafted C60 as Initiators for Anionic Polymerization", 30(15) Macromolecules (ACS) (1997), pp. 4262-4267	
	33	Shaffer, et al., "Polystyrene grafted multi-walled carbon nanotubes", Chem. Comm. (09/12/02), pp. 2074-2075	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.